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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/987,770 | 11/15/2001 | Ping Chen | | 7882 |

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EXAMINER

TRUONG, BAO Q

| | |
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| ART UNIT | PAPER NUMBER |
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2875

DATE MAILED: 03/27/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/987,770

Applicant(s)

CHEN, PING

Examiner

Bao Q. Truong

Art Unit

2875

-- Th MAILING DATE of this communication appears on th cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 November 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Priority

1. Acknowledgment is made of applicant's claim for foreign priority based on an application filed in China on 16 November 2000. It is noted, however, that applicant has not filed a certified copy of the China 00259194.4 application as required by 35 U.S.C. 119(b).

Drawings

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore,

the "reflection mirrors" in claim 1, "a divergence lens" in claim 5,

"the insulation materials are coated over the surface of said electrode pads" in claim 10,

"the spaces corresponding to the electrodes pads and the associated connection of the transparent substrate are reserved on the reflection mirrors of the reflection board" in claim 11,

and "the light-emitting diode chips may be arranged in a plurality of lines to configure an array structure" in claim 15 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

3. The drawings are objected to because there is no pointed arrow of reference numbers 7 and 7A on figures 2 and 4. A proposed drawing correction or corrected

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drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Objections

4. Claims 1, 6, 9, 10, 11 and 13 are objected to because of the following informalities:

Claim 1, there are lack of antecedent basis for "the electrode pads and the associated connection" on line 3, "the light-emitting diode chips" on line 5, and "the reflection mirrors" on line 6.

Claim 6, there are lack of antecedent basis for "the light reflection cavity board", "the outgoing holes" and "the electrodes".

Claim 9, there are lack of antecedent basis for "the fixed holes or fixed pins".

Claim 10, there is lack of antecedent basis for "the insulation materials".

Claim 11, there is lack of antecedent basis for "the spaces".

Claim 13, the applicant has not clearly described what is the monomeric structure.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1, 2, 6-12, 14 and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Suehiro et al. [WO 89/05524].

Regarding claim 1, Suehiro et al. disclose a light emitting diode illuminated light emitting module having an optical processing board [11], a transparent substrate [2], a reflection board [5], electrodes pads [2a] and associated connections [3], light emitting diode chips [4], and reflection mirrors [5a] (figures 8, 9, 11-15).

Regarding claim 2, Suehiro et al. disclose a parabolic structure reflecting board [5a] (figures 9 and 11).

Regarding claim 6, Suehiro et al. disclose an outgoing hole [5d] for electrode [7a] (figure 8).

Regarding claim 7, Suehiro et al. disclose electrode pads [2a] and associated connection [3] being made of transparent and conductive materials (figure 9).

Regarding claim 8, Suehiro et al. disclose an optical processing board [11] and a transparent substrate [2] being produced as an integral (figure 11).

Regarding claim 9, Suehiro et al. disclose a fixed hole [5d] being place at a side part of the reflection board [5] (figure 8).

Regarding claim 10, Suehiro et al. disclose an insulation materials [13] being coated over the surface of the transparent substrate [2] (figure 13).

Regarding claim 11, Suehiro et al. disclose spaces corresponding to the electrode pads [2a] and the associated connection [3] of the transparent substrate [2] being reserved on the reflection mirror [5a] of the reflection board [5] (figures 8, 9).

Regarding claim 12, Suehiro et al. disclose light emitting diode chip [4] being place of the focus of the parabolic reflection board [5] (figures 8, 9, 11).

Regarding claims 14 and 15, Suehiro et al. disclose a plurality of LED chips [4] being arranged in line and array (figure 9).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 3 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suehiro et al. as applied to claim 1 above.

Regarding claim 3, Suehiro et al. disclose a parabolic reflection board (figures 9 and 11); but Suehiro et al. do not disclose the reflection board having a plane board structure.

This is considered to be a change in form or shape of the reflection board; and Change in form or shape of an element is a matter of design choice. See *Span-Deck Inc. v. Fab-Con, Inc.* (CA 8, 1982) 215 USPQ 835 and MPEP 2144.04 Changes in shape.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the parabolic reflector board to become the plane reflector board for purpose of providing a wider light reflection.

Regarding claim 13, Suehiro et al. disclose a reflection board [5] and a LED chip [4] (figure 9), but Suehiro et al. do not clearly show the single reflection board only and a single LED chip only being configured the monomeric structure.

This is considered to be a choice of making separate; and it has been held that constructing a formerly integral structure in various elements involves only routines skill in the art. *Nerwin v. Erlichman*, 168 USPQ 177, 179.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to separate the structure of Suehiro into the monomeric structure for purpose of providing a mini-single lighting unit.

9. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Suehiro as applied to claim 1 above, and further in view of Silhengst et al. [US 6,249,375].

Suehiro et al. disclose an optical processing board [11], but Suehiro et al. do not show the optical processing board being a convergence lens.

Silhengst et al. teach the use of a convergence lens [2] in combination with LED in a display sign (figure 1, column 3 lines 20-25).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the optical processing board of Suehiro by a convergence lens as taught by Silhengst to concentrate light for purpose of providing a better focus beam.

10. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Suehiro as applied to claim 1 above, and further in view of Sasajima et al. [US 5,241,457].

Suehiro et al. disclose an optical processing board [11], but Suehiro et al. do not show the optical processing board being a divergence lens.

Sasajima et al. teach the use of a divergence lens [12, 13] in combination with LED (figure 2, column 3 lines 40-45).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the optical processing board of Suehiro by a divergence lens as taught by Sasajima for purpose of providing a better light distribution.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bao Q. Truong whose telephone number is (703) 308-6452. The examiner can normally be reached on Monday-Friday (8:00 AM - 4:00 PM).


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sandra L. O'Shea can be reached on (703) 305-4939. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9318 for regular communications and (703) 872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308 0956.

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Stephen Husar
Primary Examiner

Bao Q. Truong
Examiner
Art Unit 2875

BQT
March 20, 2003